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AVID ACUTUS
turntable

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Philosophy Now

David Price finds that Avid's Acutus turntable takes first principles to the highest level...

The wonderful thing about turntables is that conceptually they're so simple, yet so complex in practice. Whereas with CD players, so many of the things that influence sound quality are simply removed because the sound is in the digital domain (which itself brings a host of other no less critical, but different, problems), with vinyl it's a long hard slog to address every single element that can affect sonics using ye olde mechanical engineering...

For example, speed stability is not achieved through relocking a datastream by substituting one silicon chip (i.e. clock IC) for another, but by painstaking attention to detail of every aspect of the drive system – from cleaning the power supply to engineering the best contact system between the motor and platter. Detail resolution is achieved not by substituting one type of DAC chip for another, but by fashioning the very best main bearing, record support and clamping system possible, whilst also maximising the effectiveness of the suspension and minimising the motor noise transfer path. In terms of the finesse and attention to detail required to work in the analogue domain, vinyl's proponents would argue the difference between designing a top turntable and CD player is like cooking the world's

most delicious spaghetti bolognese and boiling a Pot Noodle...

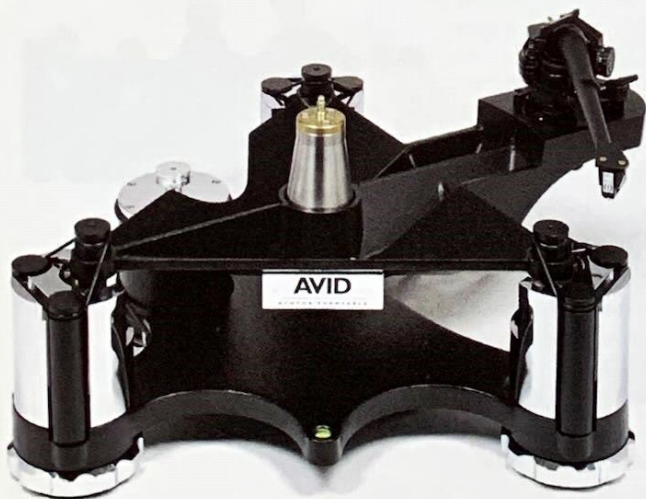
Avid is an interesting company. Unlike many other big vinyl beasts, it has very little 'baggage' simply because it is – relatively speaking – so new. It wasn't there to bring down the old giants like Garrard, usurp Japanese direct drives like Linn, or challenge the ubiquity of the Sondek LP12 like Roksan. All of that is ancient history for Avid, which launched at a time when vinyl was – if you believed most hi-fi magazines and the media in general – as dead as that proverbial parrot called Polly. This was a good thing, because it gave designer Conrad Mas a long list of turntables to analyse and then improve on. It's rather nice to start with a blank sheet of paper. With this in mind, the Acutus represents one of the most modern and (in my view) original expressions of analogue design – and it shows a lot of clever thinking, as we shall see...

Going back to basics, Mas notes that you can divide the vinyl replay process into three components. First is the platter, arm and subchassis loop – which has to be rigid enough to transmit all that low level mechanical energy from the stylus to the bearing/subchassis. Second is the suspension system which isolates the aforementioned subchassis loop from the outside world. And third is the drive system which has to spin the record at a constant speed, without interference from the mains or dynamic wow. The effectiveness of all three systems, all notionally operating independently but prone to interact with one another if not properly designed, is what makes or breaks vinyl's sound.

For me, the impressive thing about the Acutus is the way it 'answers' these three key questions. Going back to the first one (the platter/arm/subchassis), Conrad Mas argues that record support is critical, and that existing solutions don't do the job well enough. He says that

acrylic platters, whilst offering impedance matching, have the same frequency characteristics as records, hence will be excited by the resonating LP becoming one large vibrating mass – thus colouring the sound. Mats in contrast allow the record to vibrate locally or at selected nodal points, which produce instability leading to loss of information and distortion, he argues. Avid's response uses a bonded polymer surface for the mat (designed to reflect angular energy and decelerate vertical energy) and a unique clamping system where the record is clamped directly to the main bearing around its centre. In effect, this makes the record more rigid, aiding its energy transmission properties whilst removing spurious vibrations. This is key to the Avid philosophy, and what sets it apart from all other turntables, mats and clamping systems.

The bearing is also a novel design, being inverted and with a high centre of gravity to give stability and reduced noise. The point contact, made from a sapphire cup jewel and tungsten carbide ball rotates concentrically. The supporting shaft is 16mm diameter through hardened stainless steel and tapered to the top. It's designed this way to encourage energy transfer from the stylus outwards to the subchassis, rather than the other way around. The subchassis itself is a complex one piece aluminium casting, designed to give the most rigid transfer of energy between arm and bearing, but to dissipate vibration in other non-critical areas. Whilst some may find the finish on this a little 'industrial' looking, Mas says the irregular grain size and pattern of





the material dissipates energy more effectively than extruded or rolled material and the paint finish applied has been developed to assist energy release by controlling material skin tension.

The second key aspect is the suspension system, which uses three extension springs giving low centres of gravity and stability. Each spring is equally adjusted regardless of load, meaning they all behave uniformly for perfect stable vertical movement at 21Hz. Unlike other decks though, a specially designed spring termination using lateral damping rings prevents the subchassis wobbling from side to side (I've found this a particular problem on Linns and Michells, for example). This – in my view – is vitally important to maintain speed stability on a belt drive, allowing maximum delivery of motor torque.

Regular readers will know that we at *Hi-Fi World* haven't exactly been uncritical of belt drive systems on higher end turntables over the past ten years, so it's interesting to see what Conrad Mas has done with the Acutus. It is of course belt drive, but the system has been implemented very well using a near-peripheral round section belt driving the platter via a very high torque (130nM, said to be ten times that of the Impex-type motors used on the likes of Linns and Regas) motor, which is completely

rebuilt in the Avid factory to further reduce vibration and noise. This is powered by a powerful split-phase quartz-locked power supply. Thanks to the rubber rings that ensure the Acutus's suspension can only move upward and not sideways, the belt gets a very tight and strong grip on the platter. Evidence of the power of the motor can be seen on initial switch on, when there's an awful groaning noise as the belt strains to reconcile the motor's JCB-like torque with a 10kg platter than doesn't want to move! This isn't exactly as slick as the effortless glide of a silent Japanese direct drive, but certainly underlines the fact that the drive system is sturdy.

Setting up the Avid was straightforward enough, although as with many decks it's best to install the arm (and cartridge) onto the subchassis first, then locate the base just where you want it and drop the subchassis on, then add platter and motor. For the purposes of this review, an SMEV was used with a van den Hul Frog cartridge (with no fluid damping). The Acutus's build is what I would describe as 'industrial' – it looks and feels like a piece of heavy engineering (and indeed it is) rather than a sumptuously finished, delicate luxury product. Indeed, whilst the rough surfacing on the subchassis and the less than immaculately smooth

chroming on the platter edge might cause some raised eyebrows to those used to Japanese esoterica, you could say it reinforces the no-nonsense approach to this brick outhouse of a turntable. Put simply, if it was a car it would be a Swiss Army spec Mercedes G-Wagen with armour plating, and not a Lexus!

SOUND QUALITY

I would like to think that in 2009, we are past the stage in the debate where journalists have to talk in terms of "the best turntable in the world". I think there as many of these as there are people in the world, and never underestimate the power of human subjectivity and individual taste to bring disorder to any type of reasoned debate! So, I am not going to make dramatic pronouncements (as Tony Blair once famously said, "now is not the time for sound-bites, but I can feel the hand of history on my shoulder"), rather I'll try to explain why I think this is *one* of the great turntables in the world...

The Acutus has a very neutral sound, which is to say that it both takes you very intricately in to the recording itself, and at the same time rather removes you from it. By this I mean it is so incisive that it gets past much of what is wrong with a particular recording/mastering/pressing, offering a direct route to

the music without concerning you too much with how it gets there. By any criterion, this is an astonishing feat and puts it in the company of the world's very best disc spinners. However, there's still something about it that might leave some people cold. So insightful is its performance, so matter of fact is the way it brings the music to the listener, that some of those who've taken the path of the righteous (sorry, I mean 'chosen vinyl as their preferred music source') might be disappointed by its lack of euphony. It's not a seductive music maker in the Linn Sondek LP12 mode or a blood and guts bruiser like the Garrard 401. Rather, it has relatively little discernible character at all, if any - and some might not like this.

I think my 'news reader' test is the easiest way to predict whether you'd like the Avid. Are you a fan of the warm, Caribbean folksiness of ITV's Trevor McDonald, the prim and proper tones of the BBC's Fiona Bruce, or do you like that Sky guy who just reads the news without any fuss - what's his name again? See what I mean? The Acutus is the turntable with no name, the characterless, charmless and faultless one that no one wants to talk about because it just gets on with the job.

For example, when I first spun Steely Dan's 'Deacon Blue' from that jewel-like 'Aja' LP, I sat there rather transfixed with Donald Fagen's voice. There were moments when I would marvel at the warmth of that superb bass guitar sound, and the brilliantly dextrous way it was played, or delight at the sublime hi-hat sound (thanks also to SME and vdH here!) which was about as realistic as I've ever heard outside a concert hall with its shimmering harmonics and supernatural air. But actually what locked me into this song was the nasal, New York, Jewish whine that intoned, "I'll learn to work the saxophone/ I'll play just what I feel/ Drink Scotch whisky all night long/ And die behind the wheel"... It's the juxtaposition of Fagen's bitterly acerbic, almost poisonous lyrics with Walter Becker's soft, inoffensive minor melodies that makes this song so powerful, and Fagen's plaintive vocal delivery tops it off brilliantly - and never have I heard it so direct as with this turntable.

Moving to '1000 Knives' from Yellow Magic Orchestra's dark 1981 ambient electronic 'BGM', and once again you could sit there and gasp in awe at the clarity of one of the earliest digital recordings, the sumptuous warmth of those arpeggiating Korg analogue synthesisers and crashing Roland drum

machines. You could marvel at superlative bass grip the Acutus displayed and its vast, widescreen projection of the soundstage (or should that be soundscape?). And you could smile at the thunderous dynamics, hitherto unheard, as the brooding songs builds to a crescendo. But again I found myself transfixed by what the song was doing, the emotions it was evoking and where it was pushing itself. At the end I was left with an even deeper respect for its composer Ryuichi Sakamoto - and an insatiable appetite for more.

I also found myself completely mesmerised by my small but growing collection of classical music - and better able to appreciate it both on a sensual and an intellectual level. The Acutus, acting as an impartial 'broker' of the music rather than editorialising, became the perfect tool for this type of music, which in my opinion needs replay equipment of the very highest quality if it is to 'work' properly. My Deutsche Grammophon pressing of Beethoven's Pastoral Symphony (Karajan/Dresdner Philharmonic) was raised to a new level in terms of musical enjoyment - this turntable bringing me closer to that live recording moment than I've ever been, and also reminding me (as if I needed it) just how disarmingly high resolution the vinyl medium can be.

For the past month I've been running the gamut of my record collection, finding this deck 'unlock' so many previously inaccessible pieces of music. This is all the more pertinent to me, as I'm the sort who buys LPs because he "must have them" - then often doesn't play them for years after. But it hasn't been all good news, because I find myself having to be in a particular mood to listen to the Acutus. Unlike the LP12, for example, it is not a turntable you can put on as a source of background music. The big Avid is not something to make you enjoy music, it is something to let you experience it. This means that I find myself having to be in the right mood - receptive, so to speak - to the music in all its powerful glory, rather than just wanting it on to ease me or please me. It's a deck that makes you sit up and listen, and my point is that when I'm tired, stressed or otherwise occupied, I often don't want to...

So you have to buy the Avid Acutus knowing what you're letting yourself in for. It's a big, powerful and



bracing performer that blows out all the cobwebs, and lets the music break on through to you. At this point, I can realise how all the other turntables I've lived with mediate it in some way, sweeten the pill or put syrup in the porridge, so to speak. This turntable doesn't do that - so it's not for everyone.

Aside from noting that this won't satisfy the 'single ended valves and vinyl' brigade who like sumptuousness above all else, the only other remark has to be about its bass. It is the tightest sounding belt drive turntable I've ever heard, but still sounds a little soft compared to my direct driven Sony TTS-8000. Bass guitar notes switch on an off like LEDs through the latter, but via the Avid there's still the slightest, merest delay. I think it's only when you get up to the likes of the Continuum Caliburn that you truly get past this - and that means spending many tens of thousands of pounds more.

CONCLUSION

It's hard to review a turntable such as this, which is so clearly brilliant in so many areas. Instead, the debate becomes not about its relative merits but whether its particular nature suits you, sir! I'd venture to suggest that if you've got £7,300 to spend on this slice of audio esoterica, then you should take a few days off work (if indeed you're not already 'post-economic' as they used to say in the days of the dot-com boom) and listen to it, and its rivals from Linn, Thorens, Roksan, SME *et al.*, to see which sound you prefer. As for me personally, I think this about as close to the sound I am looking for.

REFERENCE SYSTEM

Sony TTS-8000/SME Series V/ vdH Frog turntable
Icon Audio PS3 phono stage
Sugden IA-4 amplifier
Yamaha NS1000M speakers

VERDICT

One of the great superdecks, this offers dizzying musical insight with all the drama and majesty that ensues.

AVID ACUTUS £7,300

Avid Hi-Fi

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www.avidhifi.co.uk

FOR

- superb stability
- glassy transparency
- breathtaking dynamics
- unerring musicality
- design, packaging, set-up

AGAINST

- matter of fact nature not for everyone

MEASURED PERFORMANCE

The Acutus keeps a tight grip on speed, our analysis shows. The basic unweighted wow and flutter figure (IEC Lin) comes out at 0.076% but this figure includes slight disc eccentricity at 0.55Hz, seen as the peak at far left. The IEC weighting filter eliminates this inevitable component (test discs cannot be perfectly centred), giving a low 0.054% figure - a very good result. Components are visible at 2.8Hz and from 8Hz-10Hz but at -80dB (0.01%) and lower these are minimal. Speed measured a negligible -0.2% slow the frequency figure

of 3145.80Hz shows. So the Acutus turntable is speed accurate and very stable too, making it well engineered. NK

SPEED STABILITY

